CERTIFICATION TEST REPORT

Report Number. : 11613188-E1V1

Applicant	:	Vital Connect Inc. 900 E. Hamilton Ave., Suite 500 Campbell, CA 95008, U.S.A
Model	:	VitalPatch 1.5
FCC ID	:	SPO-VCI-VP2
IC	:	11013A-VCIVP2
EUT Description	:	Wireless Health Monitor
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART C INDUSTRY CANADA RSS - 247 ISSUE 1

Date Of Issue:
March 09, 2017

Prepared by:
UL Verification Services Inc.
47173 Benicia Street
Fremont, CA 94538, U.S.A.
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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	2/9/2017	Initial Issue	---
V2	3/9/2017	Updates section 6 and 8.1	F. de Anda

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Vital Connect Inc.
900 E. Hamilton Ave., Suite 500
Campbell, CA 95008, U.S.A

EUT DESCRIPTION: Wireless Health Monitor

MODEL: VitalPatch 1.5

SERIAL NUMBER: AVC2B008BF_00302F (Radiated);
AVC2B008BF_0032FE (Conducted)

DATE TESTED: February 7th, 2017 – February 8th 2017

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart C	Pass
INDUSTRY CANADA RSS-247 Issue 1	Pass
INDUSTRY CANADA RSS-GEN Issue 4	Pass

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Verification Services Inc. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of the U.S. government.

Approved & Released For
UL Verification Services Inc. By:

Francisco De Anda
Program Manager
UL VERIFICATION SERVICES INC.

Prepared By:

Clifford Susa
Engineer
UL VERIFICATION SERVICES INC.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, KDB 558074 D01 v03r05, ANSI C63.10-2013, RSS-GEN Issue 4, and RSS-247 Issue 1.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

47173 Benicia Street	47266 Benicia Street
☐ Chamber A (IC:2324B-1)	☐ Chamber D (IC:2324B-4)
☐ Chamber B (IC:2324B-2)	☐ Chamber E (IC:2324B-5)
☒ Chamber C (IC:2324B-3)	☐ Chamber F (IC:2324B-6)
	☐ Chamber G (IC:2324B-7)
	☐ Chamber H (IC:2324B-8)

The above test sites and facilities are covered under FCC Test Firm Registration # 208313.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at http://ts.nist.gov/standards/scopes/2000650.htm.

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4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Parameter	Uncertainty
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.84 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.65 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	3.15 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	5.36 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.32 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.45 dB
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.24 dB

Uncertainty figures are valid to a confidence level of 95%.

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5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The wireless Health Monitor (EUT) contains a battery powered wireless BLE Radio. Used for data collection. It monitors physiological data.

The Vital Connect Patch is available in two different models:
- VitalPatch Active Patch
- VitalPatch Gentle Patch

They are electrically and physically the same. The difference between the two models is that they have two different adhesive configurations: Active (Hydrocolloid adhesive) and Gentle (Silicone adhesive). Silicone adhesives provide lower skin stress during removal than hydrocolloid. However, in high humidity or perspiration conditions silicone adhesives can cause mild irritation and have reduced adhesion.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2402 - 2480	BLE	7.13	5.16

The transmitter has a maximum average conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2402 - 2480	BLE	6.79	4.78

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5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a chip antenna with a maximum gain of 0.2 dBi.

5.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was version 1.0.3.1.

5.5. WORST-CASE CONFIGURATION AND MODE

The fundamental of the EUT was investigated in three orthogonal orientations X,Y,Z, it was determined that X orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in the X orientation.

The worst-case data rate for each mode is determined to be as follows, based on input from the manufacturer of the radio.

All final tests in the BLE mode were made at 1 Mb/s.

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5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List			
Description	**Manufacturer**	**Model**	**Serial Number**
Laptop	Lenovo	T450	PC-052GC0
Laptop AC Adapter	Lenovo	ADLX45NLC2A	11S45N0295Z1ZS93541L9K
Interface Board	Cobra	10-0149	N/A

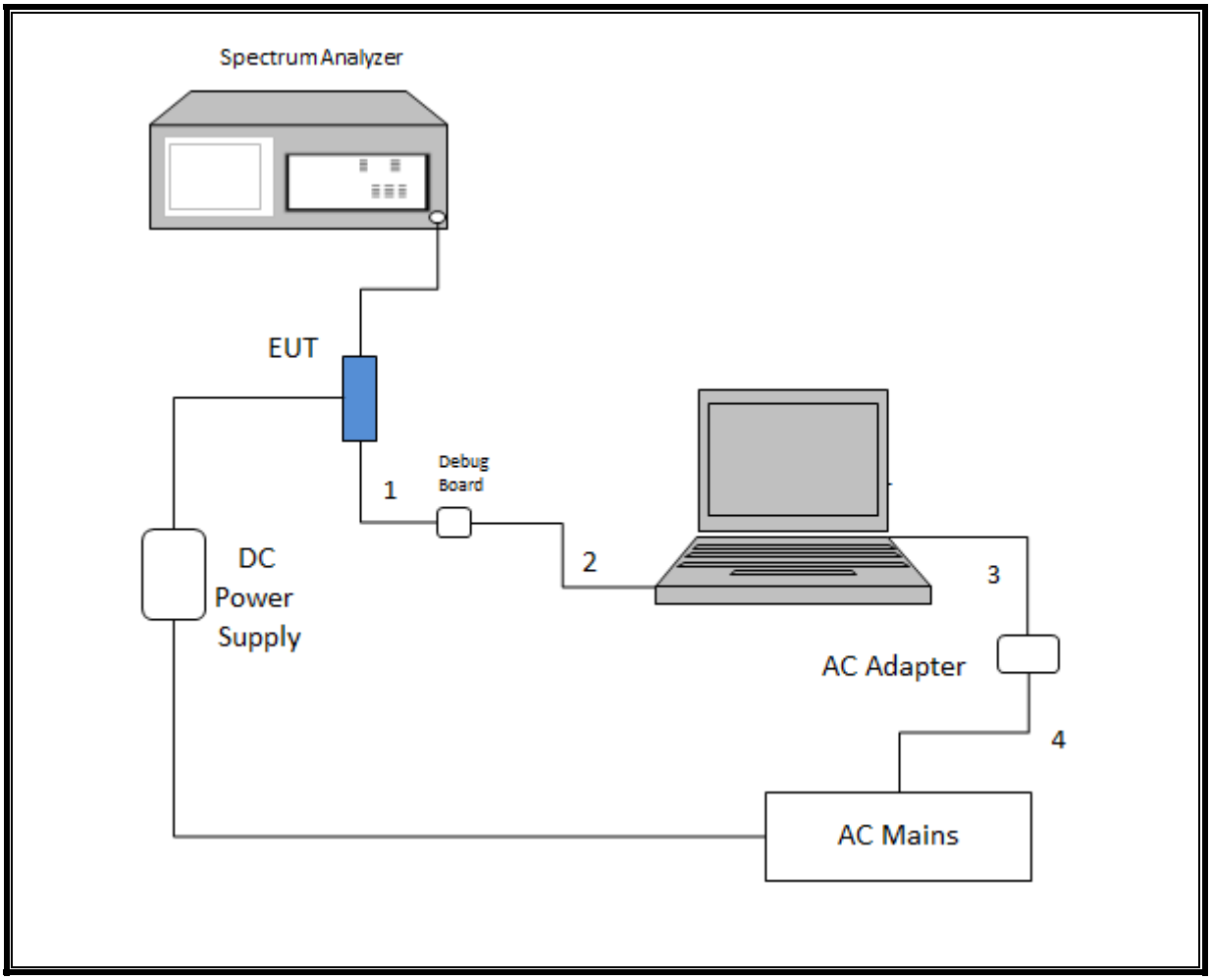
I/O CABLES

I/O Cable List						
Cable No	**Port**	**# of identical ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	Header	1	10-pin header	unshielded	0.08	Ribbon cable
2	USB	1	USB micro	unshielded	0.4	
3	DC Plug	1	DC Plug	unshielded	1.73	
4	AC Plug	1	2 prong	unshielded	0.36	

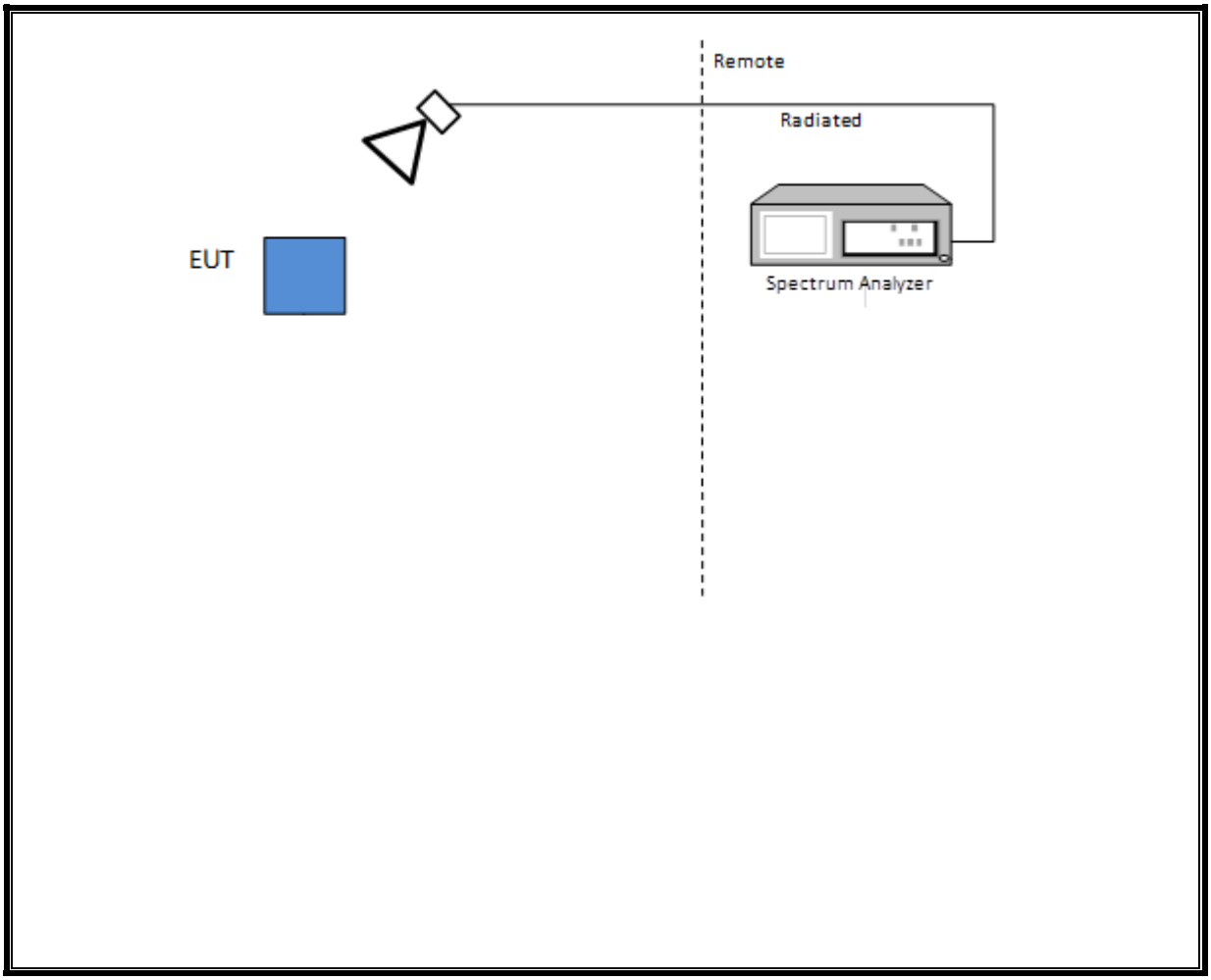
TEST SETUP

The EUT was powered by DC power supply for conducted tests and by it own battery for radiated tests. Test software exercised the radio card.

SETUP DIAGRAM FOR CONDUCTED TESTS



SETUP DIAGRAM FOR RADIATED TESTS



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6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Test Equipment List					
Description	**Manufacturer**	**Model**	**ID No.**	**Cal Date**	**Cal Due**
Radiated Software	UL	UL EMC	Ver 9.5, April 26, 2016		
Antenna Port Software	UL	UL EMC	Ver 6.0, January 19, 2017		
Power Meter	Keysight	N1911A	T229	7/28/16	7/28/17
Power Sensor	Keysight	N1921A	T413	6/20/16	6/20/17
Spectrum Analyzer	Keysight	N9030A	T905	1/11/17	1/11/18
Antenna, Biconolog, 30MHz – 1GHz	Sunol Sciences	JB1	T408	11/10/16	11/10/17
RF Preamplifier, 10kHz - 1GHz	Sonoma	310N	T15	8/26/16	8/26/17
Antenna, Horn, 1-18GHz	ETS Lindgren	3117	T119	2/28/16	2/28/17
Antenna, Horn, 18-26 GHz	ARA	MWH-1826/B	T449	05/26/16	05/26/17
RF Preamplifier, 1-18GHz	Miteq	AFS42-00101800-25-S-42	T931	8/26/16	8/26/17
RF Preamplifier, 1-7GHz	Miteq	AMF-4D-01000800-30-29P	T1574	8/26/16	8/26/17
Filter, HPF 3GHz	Micro-tronics	HPM17543	T896	8/26/16	8/26/17
Antenna, Active Loop 9KHz to 30MHz	EMCO	6502	T35	3/24/16	3/24/17

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7. ANTENNA PORT TEST RESULTS

7.1. MEASUREMENT METHODS

On Time and Duty Cycle: KDB 558074 D01 v03r05, Section 6.

6 dB BW: KDB 558074 D01 v03r05, Section 8.1.

Output Power: KDB 558074 D01 v03r05, Section 9.1.2.

Power Spectral Density: KDB 558074 D01 v03r05, Section 10.2.

Out-of-band emissions in non-restricted bands: KDB 558074 D01 v03r05, Section 11.1.

Out-of-band emissions in restricted bands: KDB 558074 D01 v03r05, Section 12.2.5.2

Band-edge: KDB 558074 D01 v03r05, Section 13.3.3

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7.2. ON TIME, DUTY CYCLE

LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method.

ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (khz)
BLE	0.093	0.625	0.148	14.88	8.273	10.752

DUTY CYCLE PLOTS

DUTY CYCLE BLE MODE

7.3. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

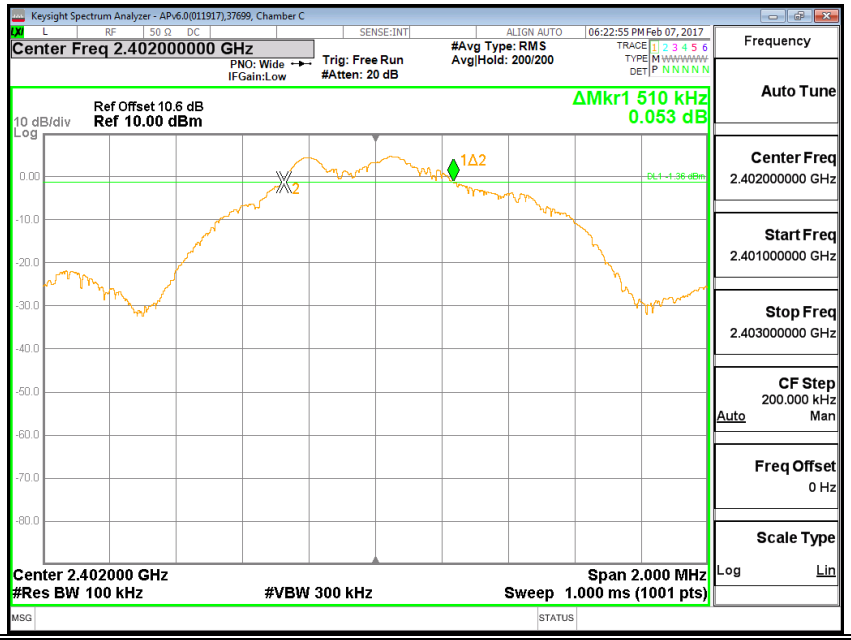
IC RSS-247 (5.2) (1)

The minimum 6 dB bandwidth shall be at least 500 kHz.

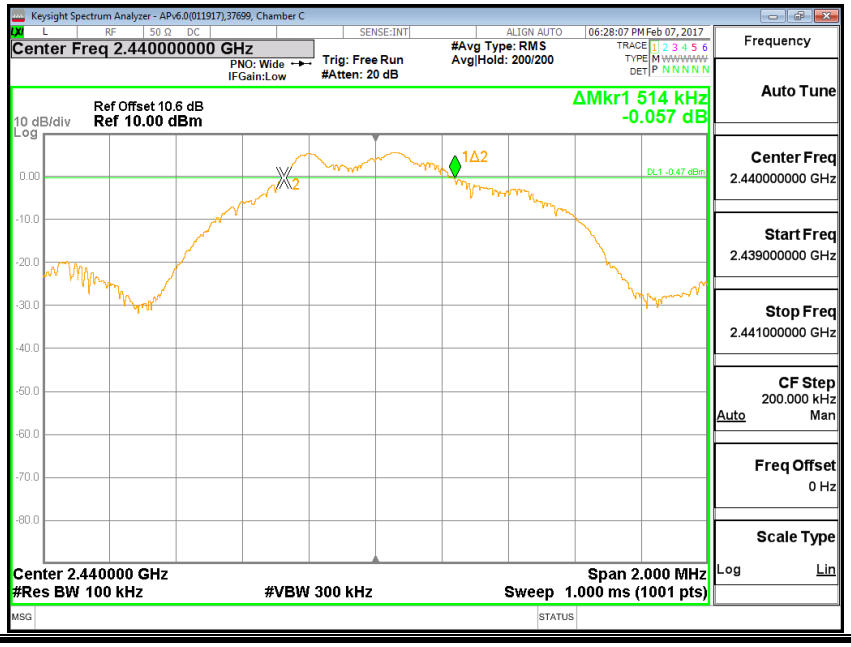
RESULTS

Channel	Frequency	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2402	0.51	0.5
Middle	2440	0.514	0.5
High	2480	0.504	0.5

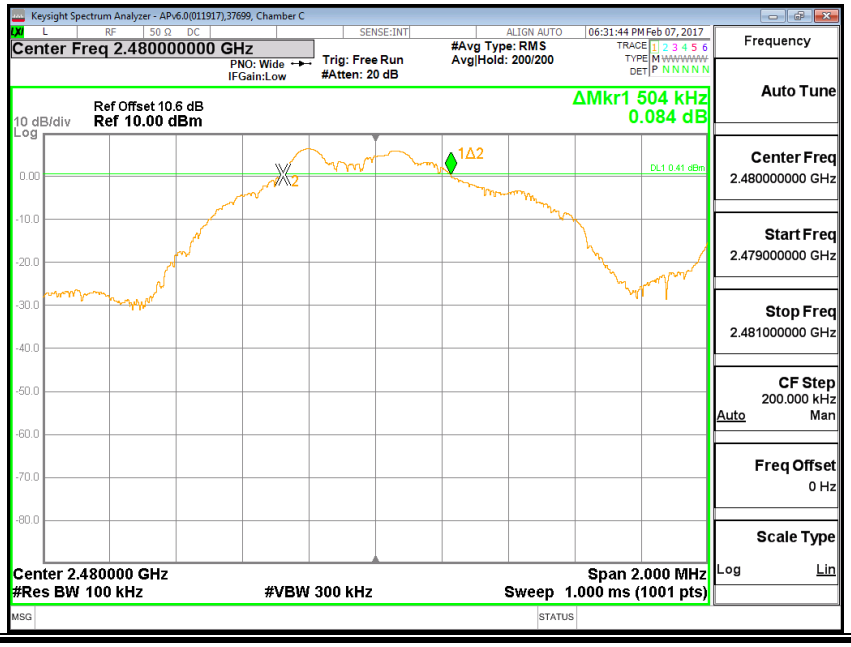
6dB LOW CH



6dB MID CH



6dB HIGH CH



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7.4. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

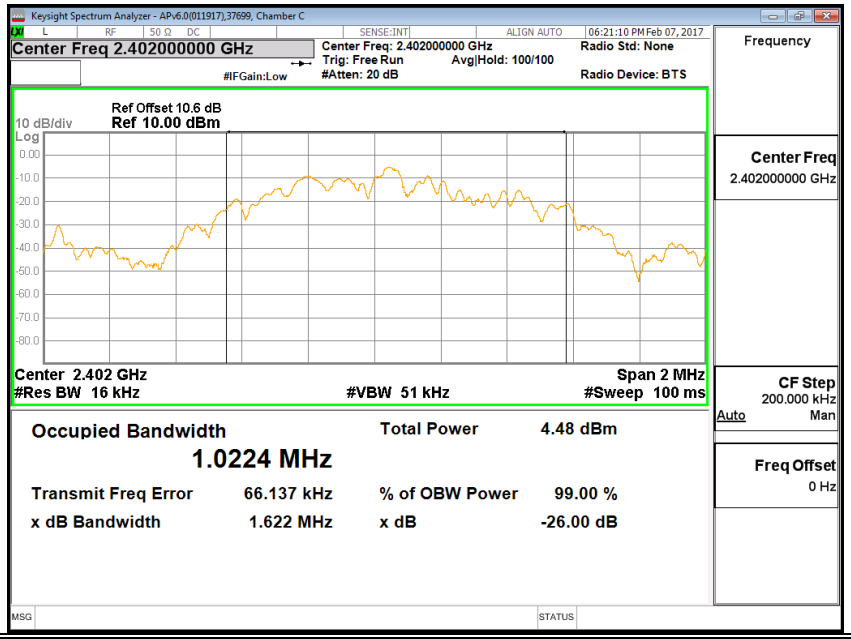
Test Procedure

The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth and to 1% of the span. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2402	1.022
Middle	2440	1.025
High	2480	1.018

OBW LOW CH



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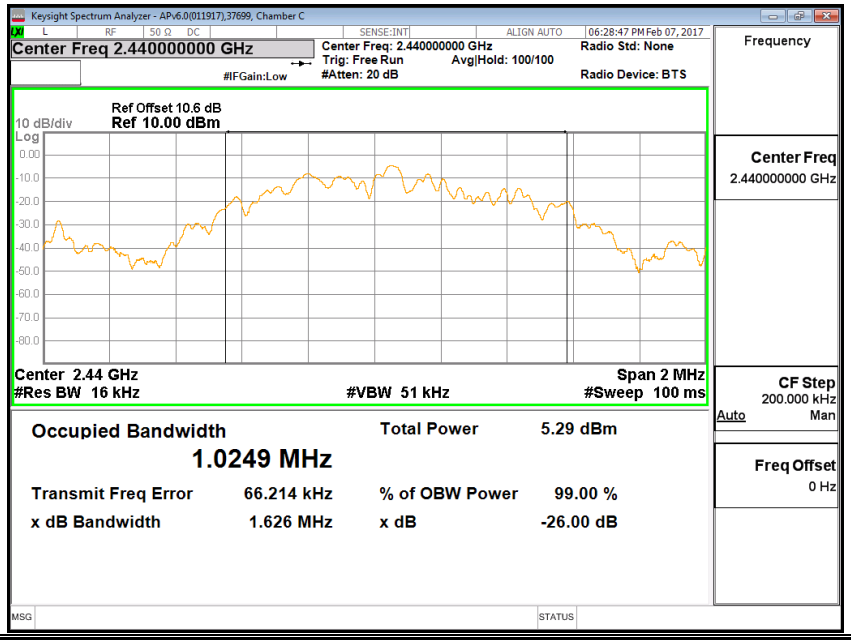
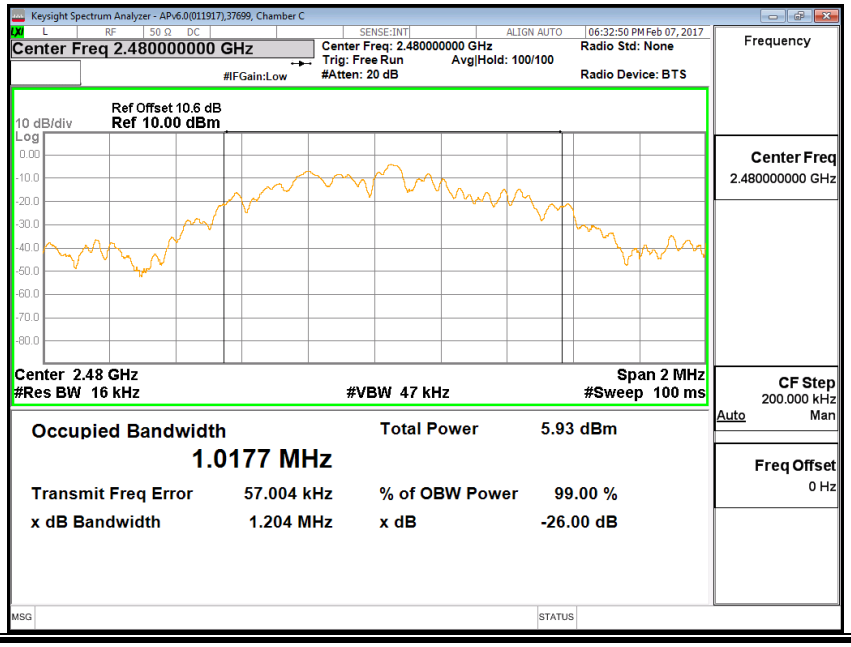
OBW MID CH



OBW HIGH CH



7.5. AVERAGE POWER

LIMITS

None; for reporting purposes only.

The cable assembly insertion loss of 10.6 dB (including 10 dB pad and 0.6 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Tested By:	37699 CS
Date:	2/8/2017

Channel	Frequency (MHz)	Avg Power Reading (dBm)
Low	2402	4.84
Middle	2440	5.94
High	2480	6.79

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7.6. OUTPUT POWER

LIMITS

FCC §15.247 (b)

IC RSS-247 (5.4) (4)

The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

RESULTS

Tested By:	37699 CS
Date:	2/8/2017

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2402	5.68	30	-24.32
Middle	2440	6.57	30	-23.43
High	2480	7.13	30	-22.87

7.7. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

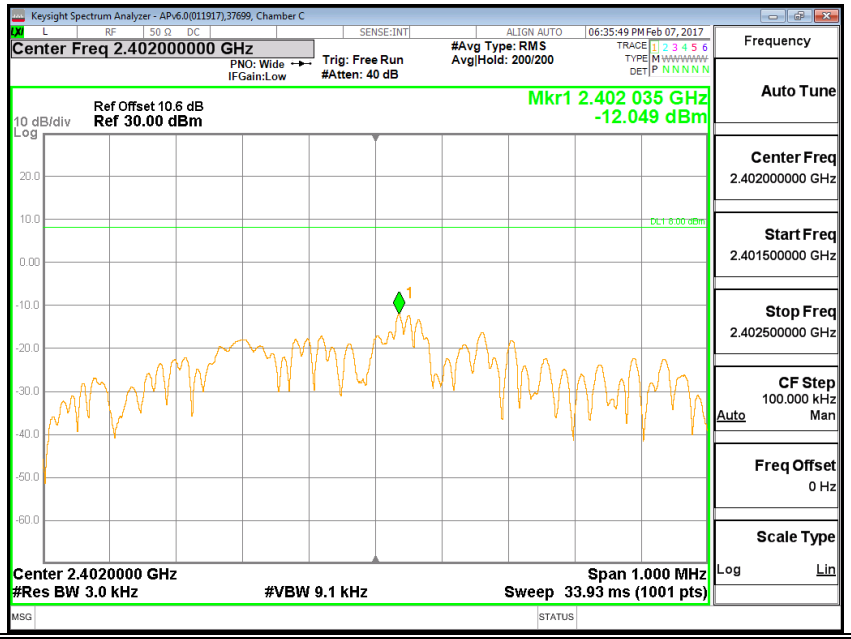
IC RSS-247 (5.2) (2)

The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

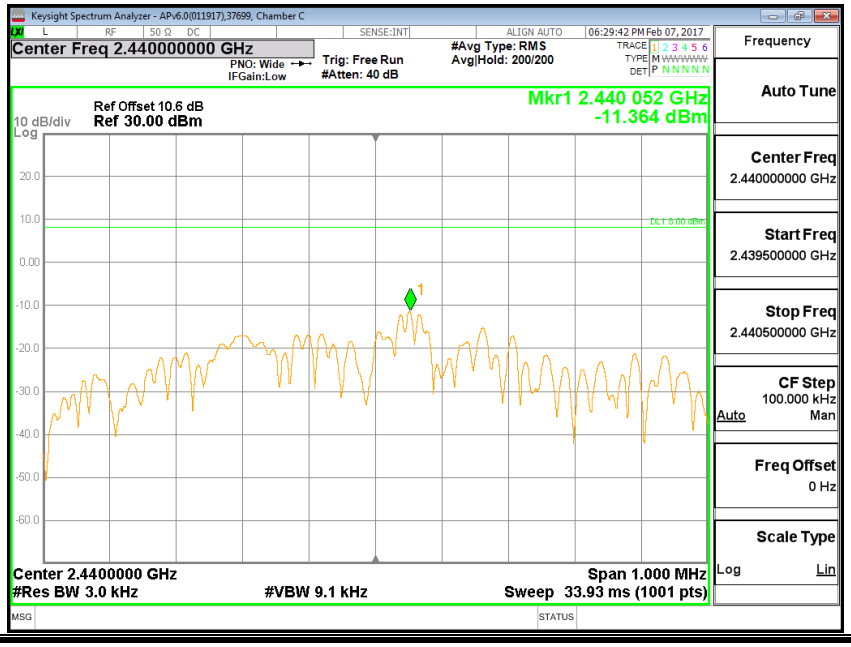
RESULTS

Channel	Frequency (MHz)	PSD (dBm)	Limit (dBm)	Margin (dB)
Low	2402	-12.05	8	-20.05
Middle	2440	-11.36	8	-19.36
High	2480	-10.90	8	-18.90

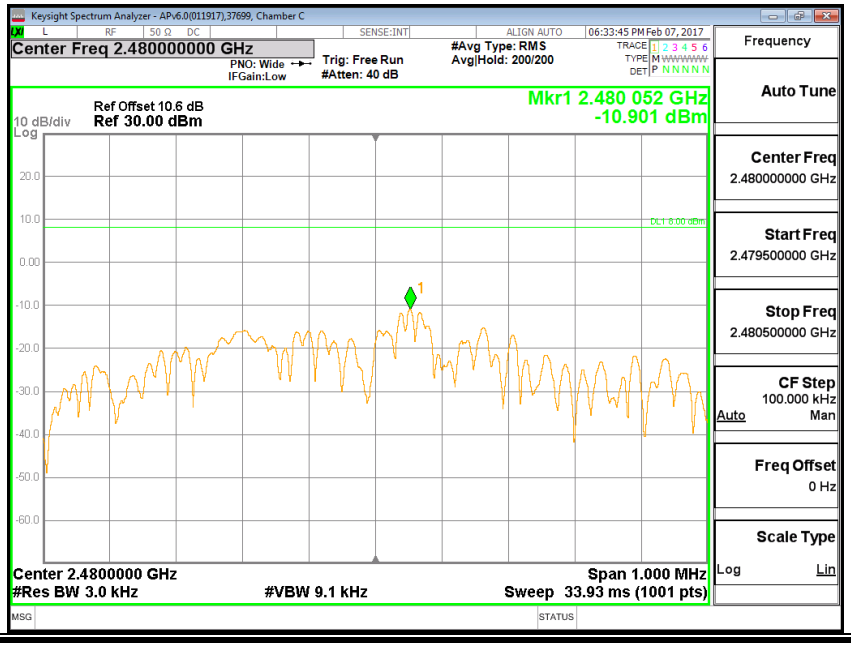
CPSD LOW CH



CPSD MID CH



CPSD HIGH CH



7.8. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

LIMITS

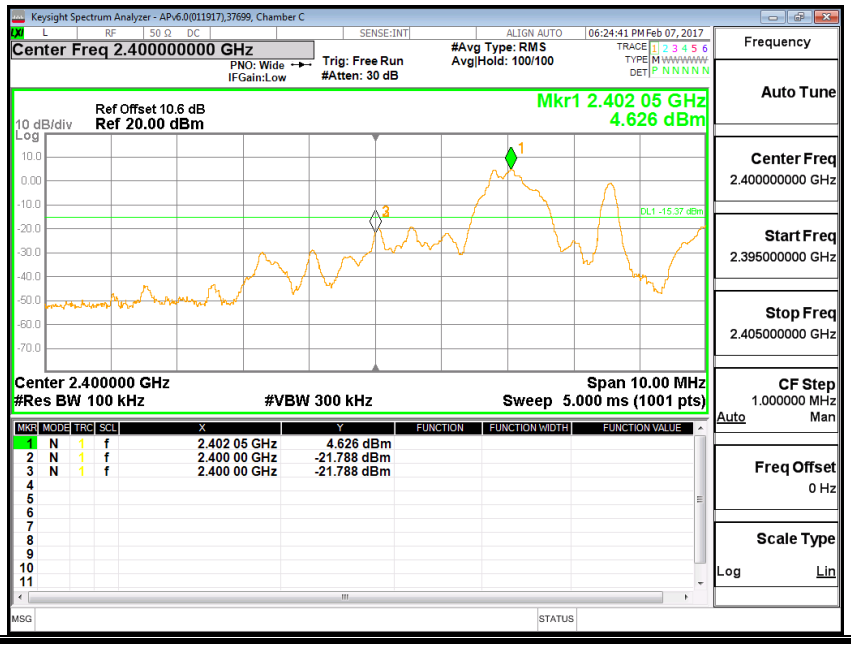
FCC §15.247 (d)

IC RSS-247 (5.5)

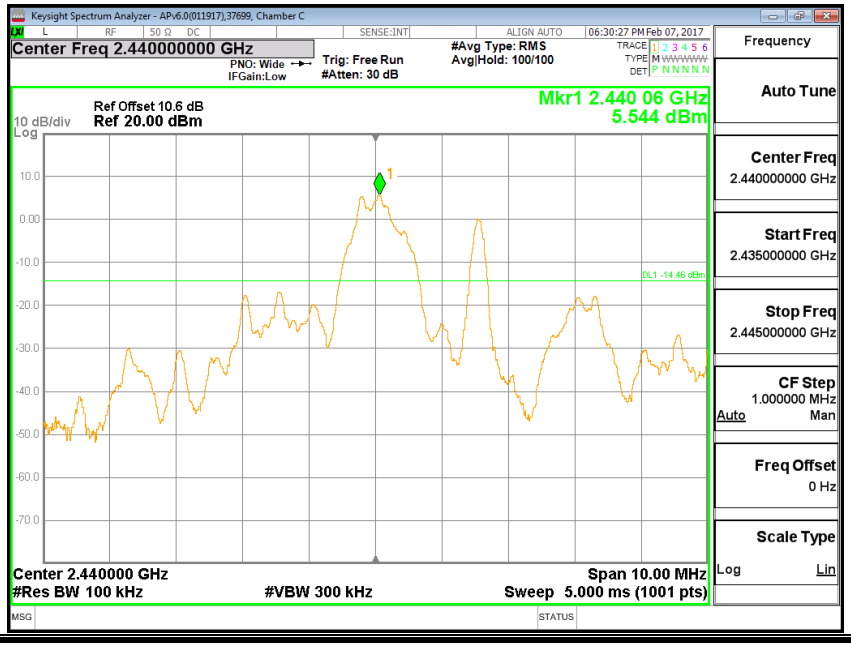
Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

RESULTS

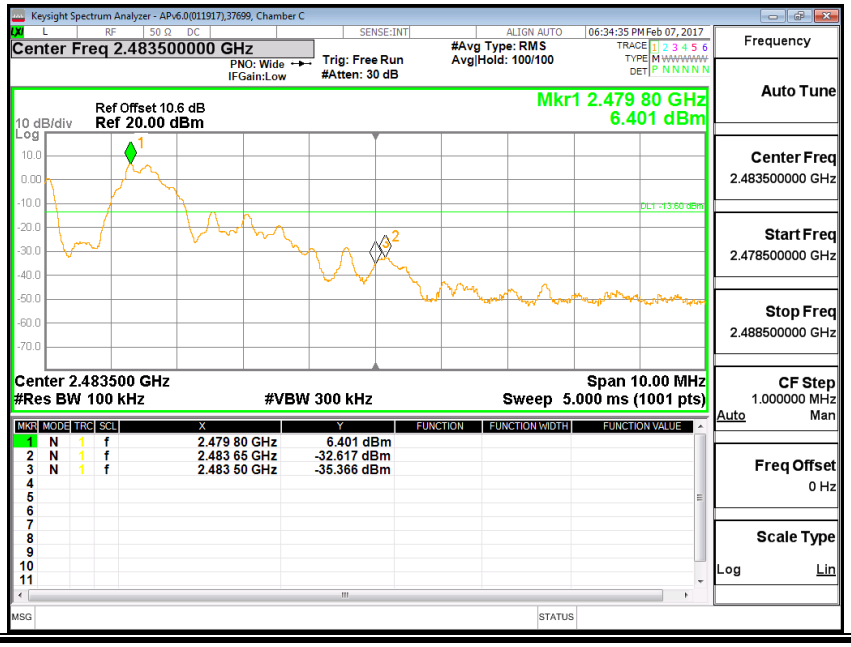
CBE LOW CH



CBE MID CH



CBE HIGH CH



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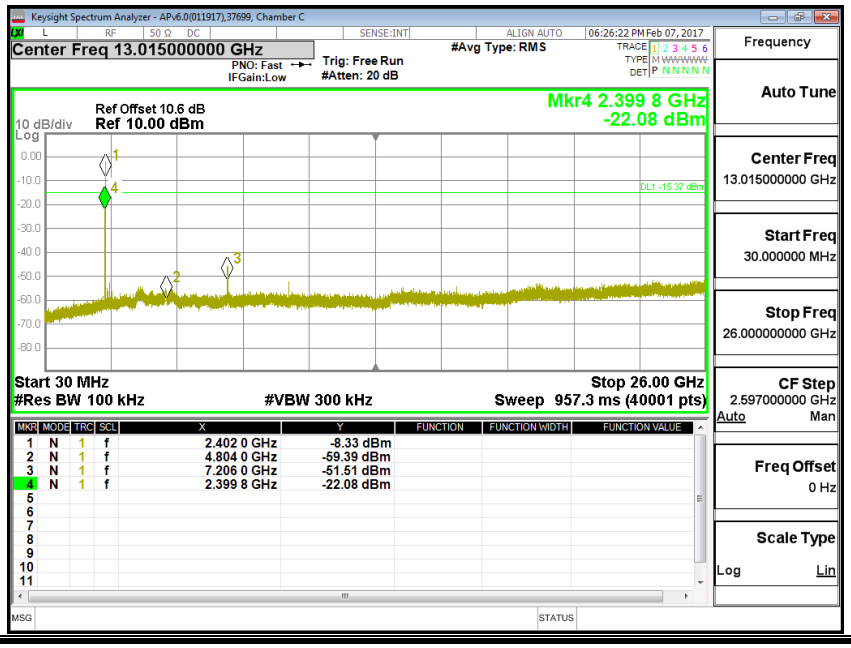
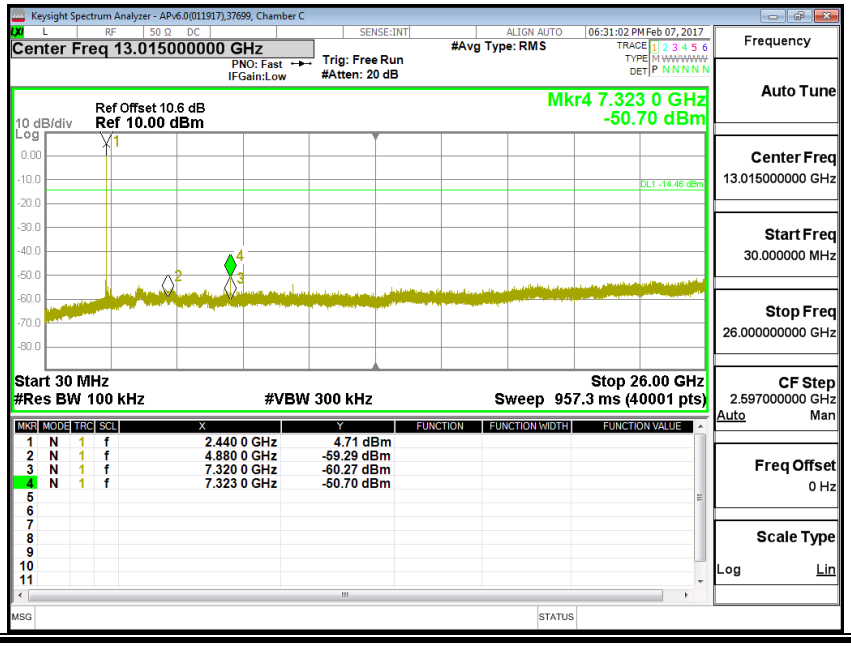
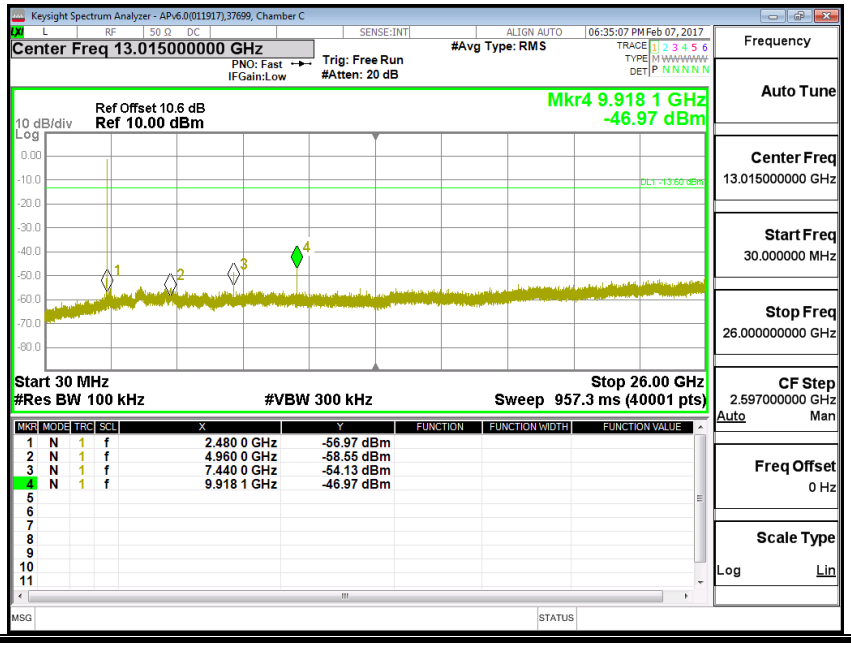
CSPUR LOW CH



CSPUR MID CH



CSPUR HIGH CH



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8. RADIATED TEST RESULTS

8.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

IC RSS-GEN, Section 8.9 and 8.10.

(a) Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For pre-scans above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 KHz for peak measurements.

For final measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and as applicable for average measurements.

The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

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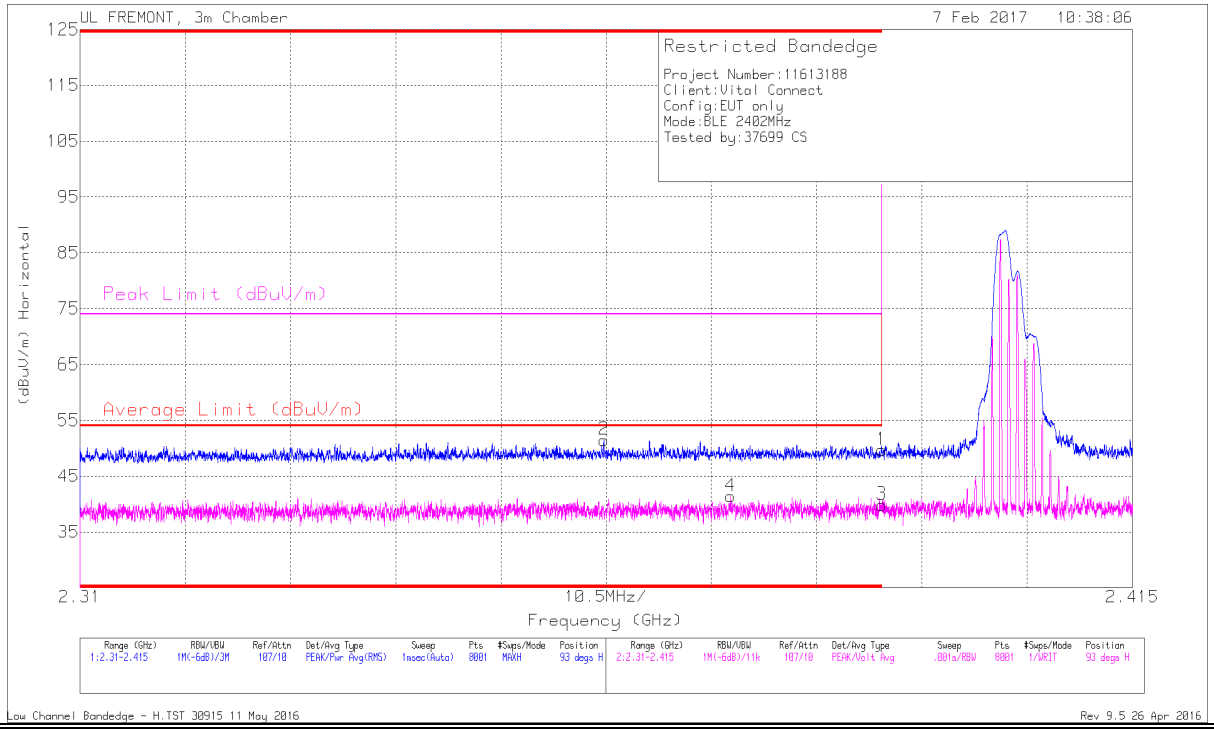
8.2. RESTRICTED BANDEDGE (LOW CHANNEL)

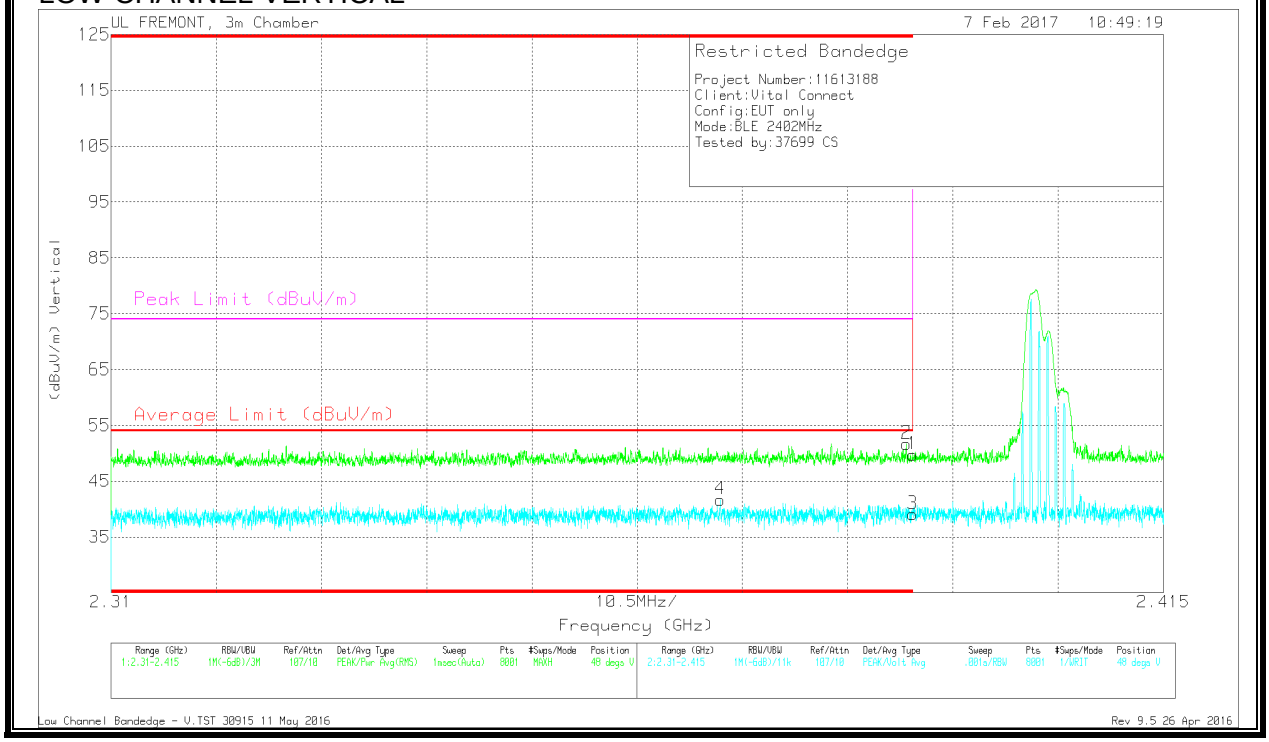
LOW CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	38.4	Pk	32.1	-20.8	49.7	-	-	74	-24.3	93	181	H
2	* 2.362	40.38	Pk	31.9	-20.8	51.48	-	-	74	-22.52	93	181	H
3	* 2.39	28.57	VA1T	32.1	-20.8	39.87	54	-14.13	-	-	93	181	H
4	* 2.375	30.29	VA1T	32	-20.9	41.39	54	-12.61	-	-	93	181	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

LOW CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	38.47	Pk	32.1	-20.8	49.77	-	-	74	-24.23	48	236	V
2	* 2.389	40.41	Pk	32.1	-20.8	51.71	-	-	74	-22.29	48	236	V
3	* 2.39	27.81	VA1T	32.1	-20.8	39.11	54	-14.89	-	-	48	236	V
4	* 2.371	30.61	VA1T	32	-20.9	41.71	54	-12.29	-	-	48	236	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

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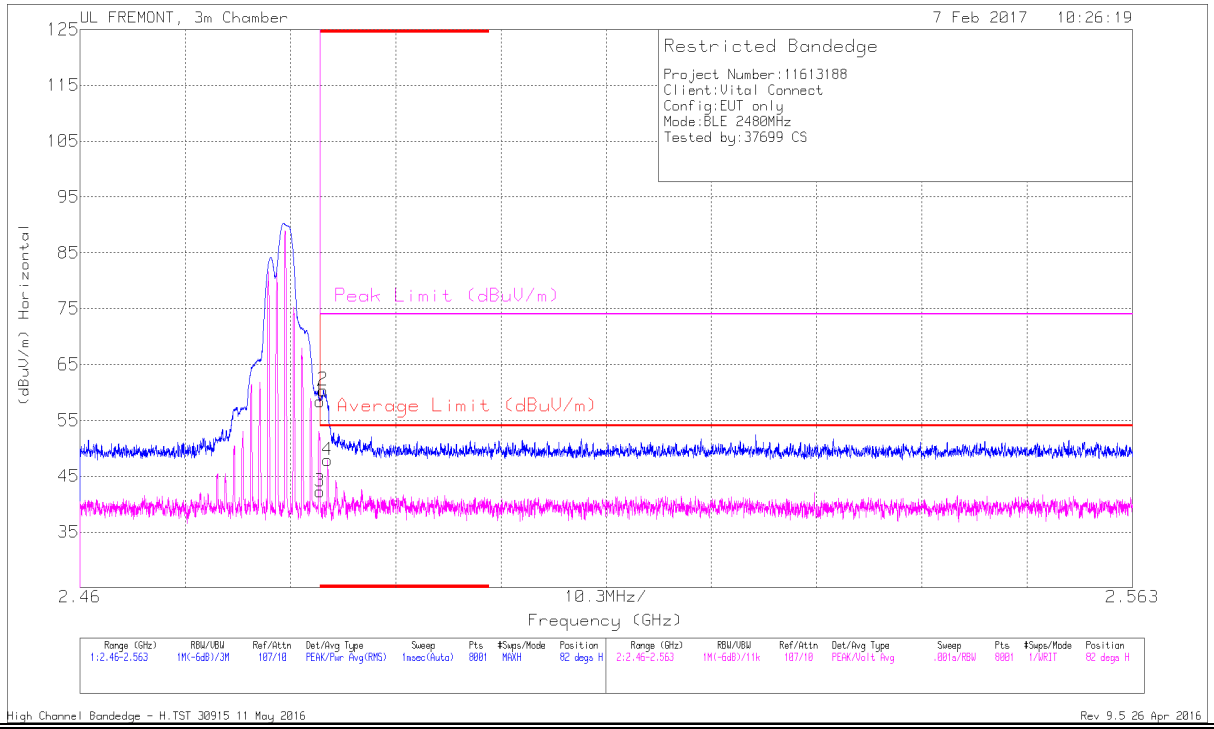
8.3. AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	46.84	Pk	32.4	-20.8	58.44	-	-	74	-15.56	82	134	H
2	* 2.484	48.79	Pk	32.4	-20.8	60.39	-	-	74	-13.61	82	134	H
3	* 2.484	30.65	VA1T	32.4	-20.8	42.25	54	-11.75	-	-	82	134	H
4	* 2.484	36.27	VA1T	32.4	-20.8	47.87	54	-6.13	-	-	82	134	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

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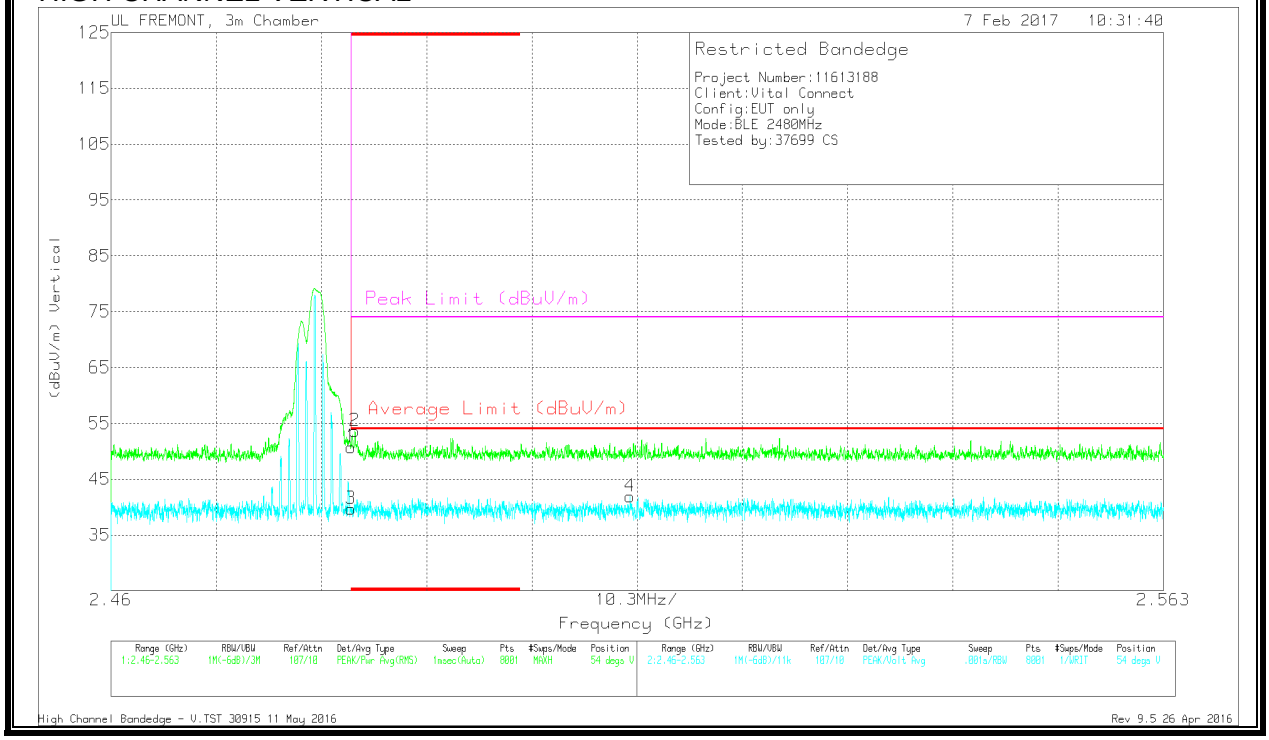
HIGH CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	39.13	Pk	32.4	-20.8	50.73	-	-	74	-23.27	54	318	V
2	* 2.484	42	Pk	32.4	-20.8	53.6	-	-	74	-20.4	54	318	V
3	* 2.484	28.07	VA1T	32.4	-20.8	39.67	54	-14.33	-	-	54	318	V
4	2.511	30.28	VA1T	32.4	-20.8	41.88	54	-12.12	-	-	54	318	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

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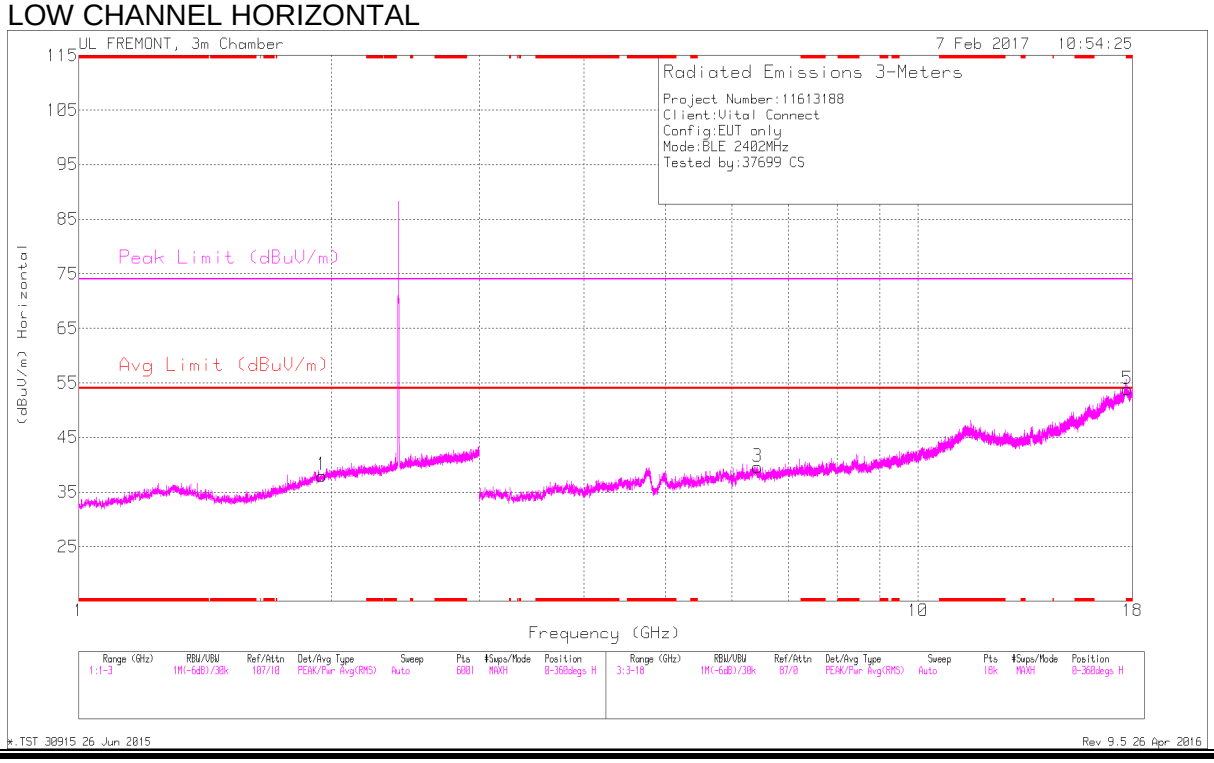
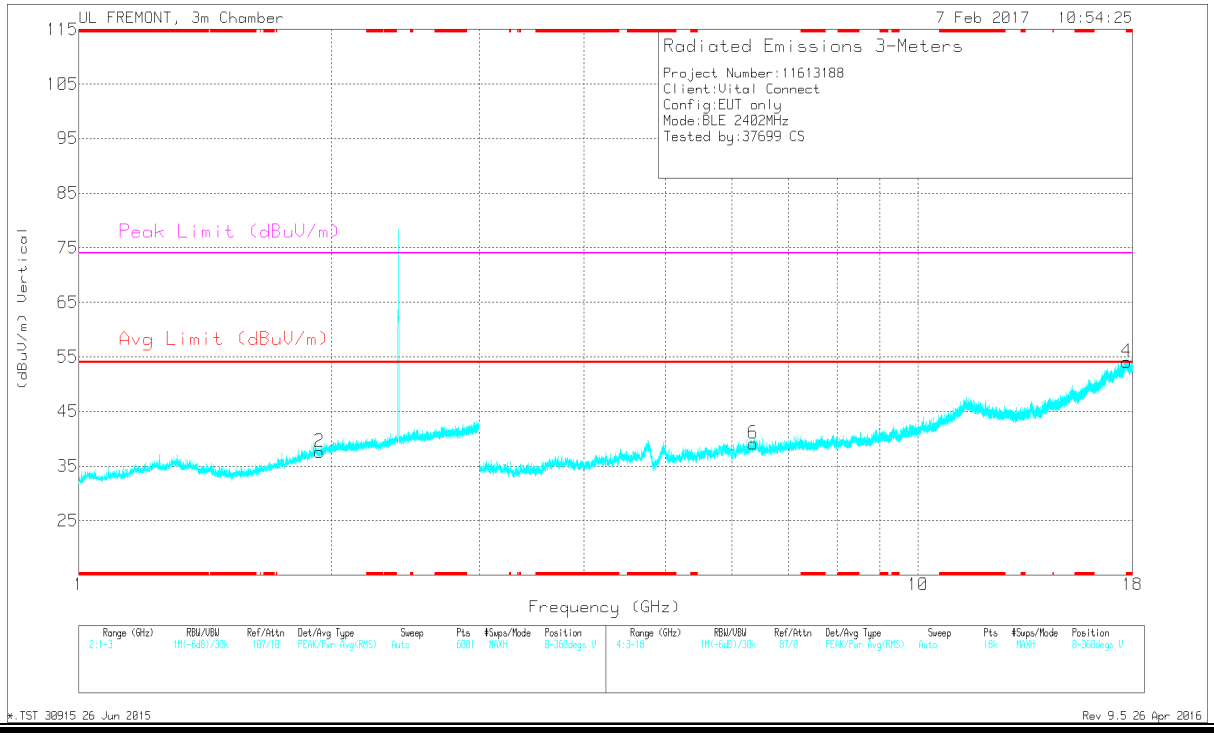
8.4. HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 17.743	28.98	PKFH	41.4	-11.8	58.58	-	-	74	-15.42	197	100	H
	* 17.742	20.27	VA1T	41.4	-11.8	49.87	54	-4.13	-	-	197	100	H
4	* 17.731	29.13	PKFH	41.4	-11.9	58.63	-	-	74	-15.37	247	163	V
	* 17.732	20.62	VA1T	41.4	-11.9	50.12	54	-3.88	-	-	247	163	V
2	1.933	35.8	PKFH	31.5	-23.4	43.9	-	-	-	-	141	126	V
1	1.949	33.09	PKFH	31.6	-23.1	41.59	-	-	-	-	111	157	H
6	6.361	35.25	PKFH	35.6	-27.2	43.65	-	-	-	-	139	150	V
3	6.432	34.77	PKFH	35.6	-26.6	43.77	-	-	-	-	101	234	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PKFH - FHSS: RB=1MHz VB=3 x RB, Peak
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

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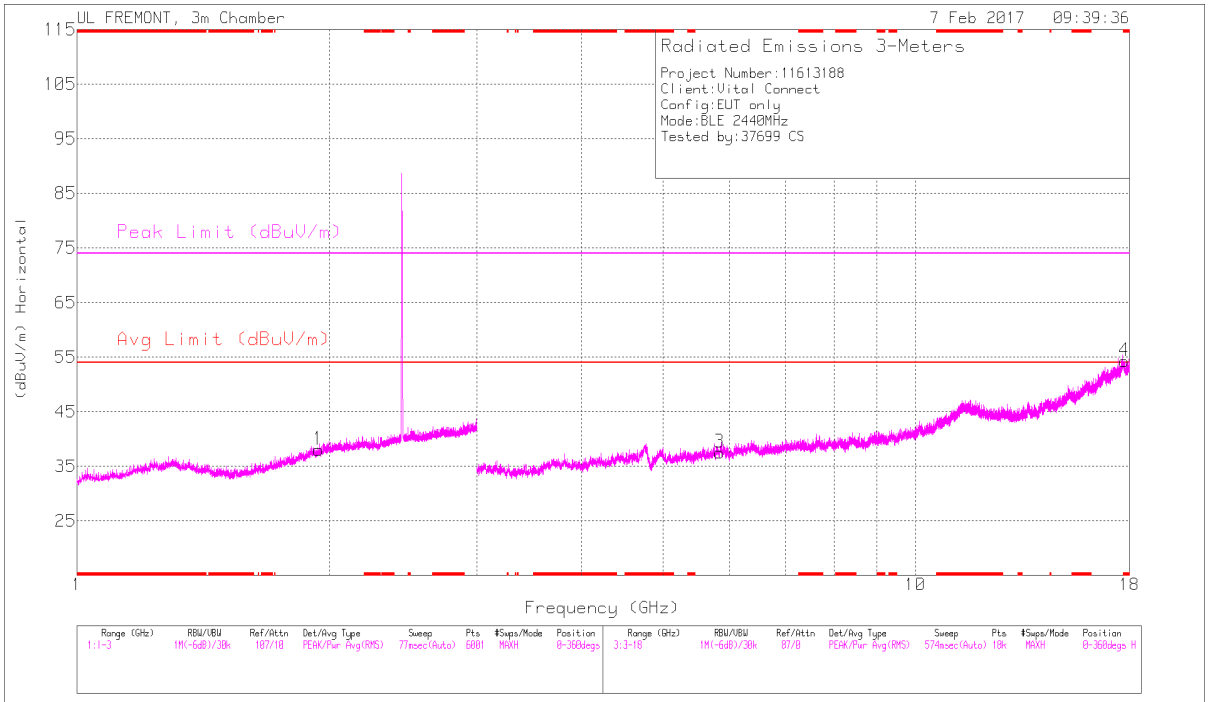
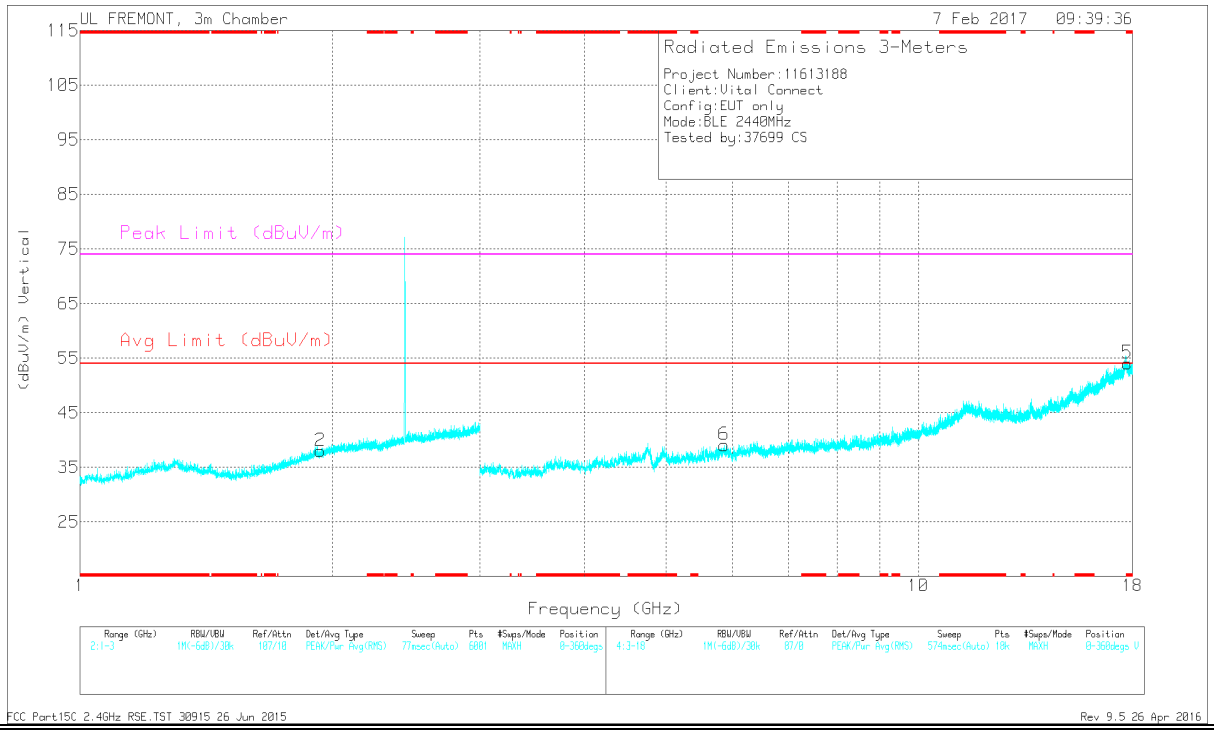
MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



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Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 17.749	28.66	PKFH	41.4	-11.9	58.16	-	-	74	-15.84	72	123	H
	* 17.746	20.8	VA1T	41.4	-11.8	50.4	54	-3.6	-	-	72	123	H
5	* 17.753	29.14	PKFH	41.4	-12	58.54	-	-	74	-15.46	178	245	V
	* 17.751	20.07	VA1T	41.4	-11.9	49.57	54	-4.43	-	-	178	245	V
2	1.937	33	PKFH	31.5	-23.2	41.3	-	-	-	-	165	100	V
1	1.943	33.36	PKFH	31.6	-23.2	41.76	-	-	-	-	201	153	H
3	5.841	34.26	PKFH	34.9	-27.3	41.86	-	-	-	-	43	100	H
6	5.866	35.16	PKFH	35	-27.5	42.66	-	-	-	-	66	160	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PKFH - FHSS: RB=1MHz VB=3 x RB, Peak
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

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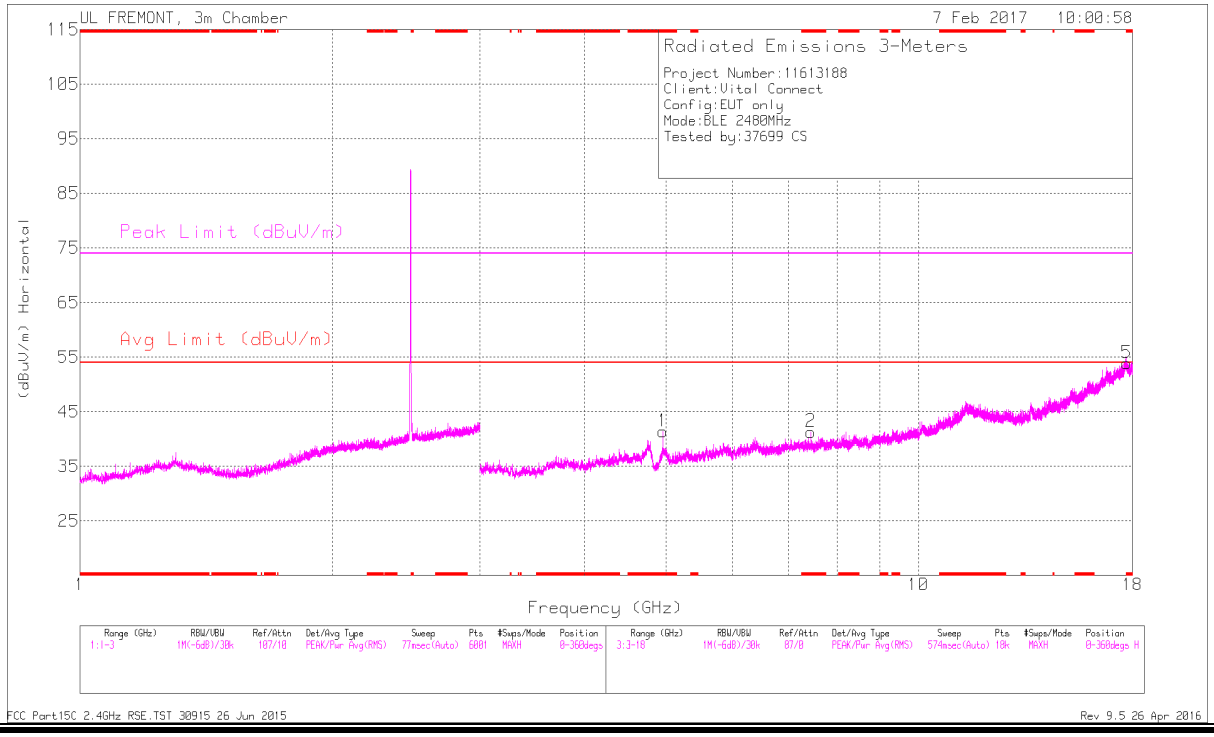
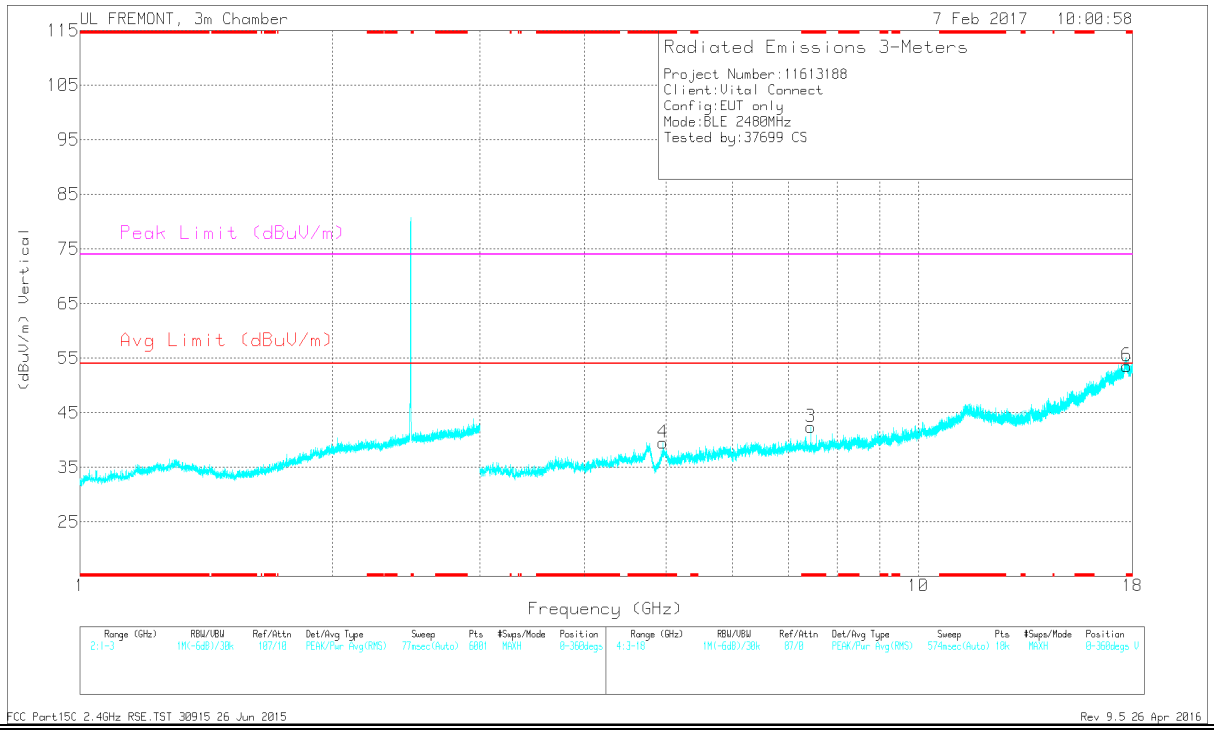
HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



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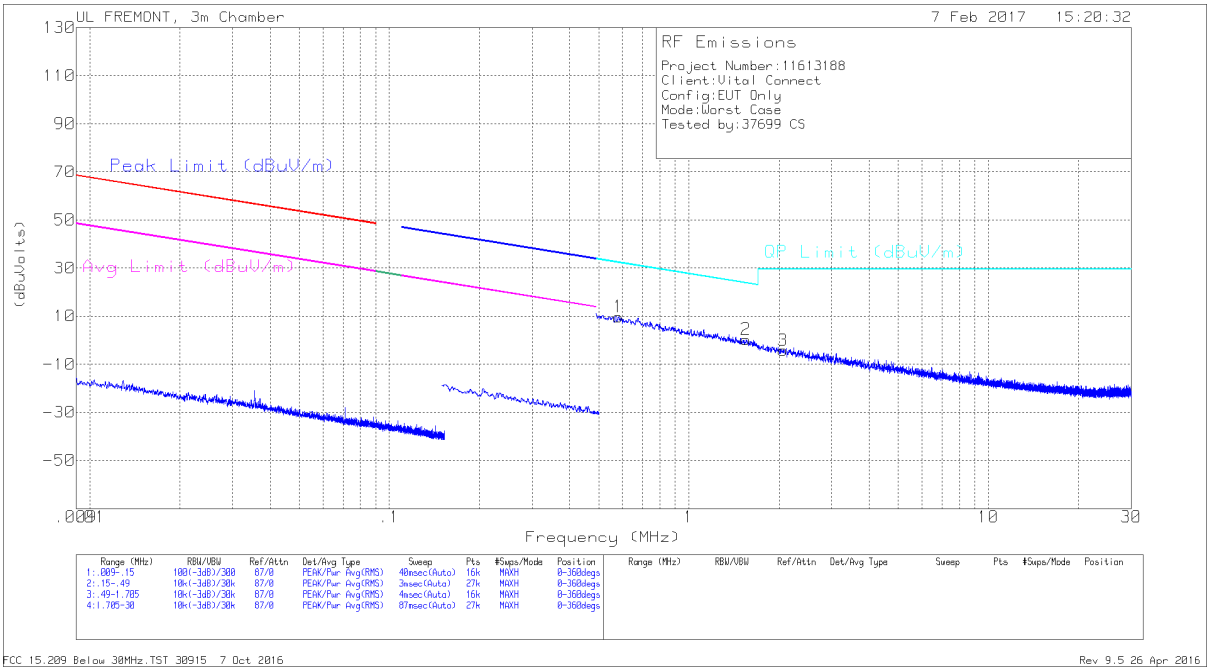
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.961	39.09	PKFH	34.2	-28.5	44.79	-	-	74	-29.21	351	101	H
	* 4.959	34.09	VA1T	34.2	-28.5	39.79	54	-14.21	-	-	351	101	H
2	* 7.438	33.1	PKFH	35.7	-25	43.8	-	-	74	-30.2	5	103	H
	* 7.438	27.49	VA1T	35.7	-25	38.19	54	-15.81	-	-	5	103	H
5	* 17.725	28.55	PKFH	41.4	-11.9	58.05	-	-	74	-15.95	73	167	H
	* 17.725	19.88	VA1T	41.4	-11.9	49.38	54	-4.62	-	-	73	167	H
6	* 17.718	28.61	PKFH	41.4	-11.9	58.11	-	-	74	-15.89	36	106	V
	* 17.717	20.5	VA1T	41.4	-11.9	50	54	-4	-	-	36	106	V
3	* 7.439	34.82	PKFH	35.7	-25	45.52	-	-	74	-28.48	200	100	V
	* 7.439	28.63	VA1T	35.7	-25	39.33	54	-14.67	-	-	200	100	V
4	* 4.958	37.5	PKFH	34.2	-28.6	43.1	-	-	74	-30.9	8	219	V
	* 4.96	30.15	VA1T	34.2	-28.5	35.85	54	-18.15	-	-	8	219	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PKFH - FHSS: RB=1MHz VB=3 x RB, Peak
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

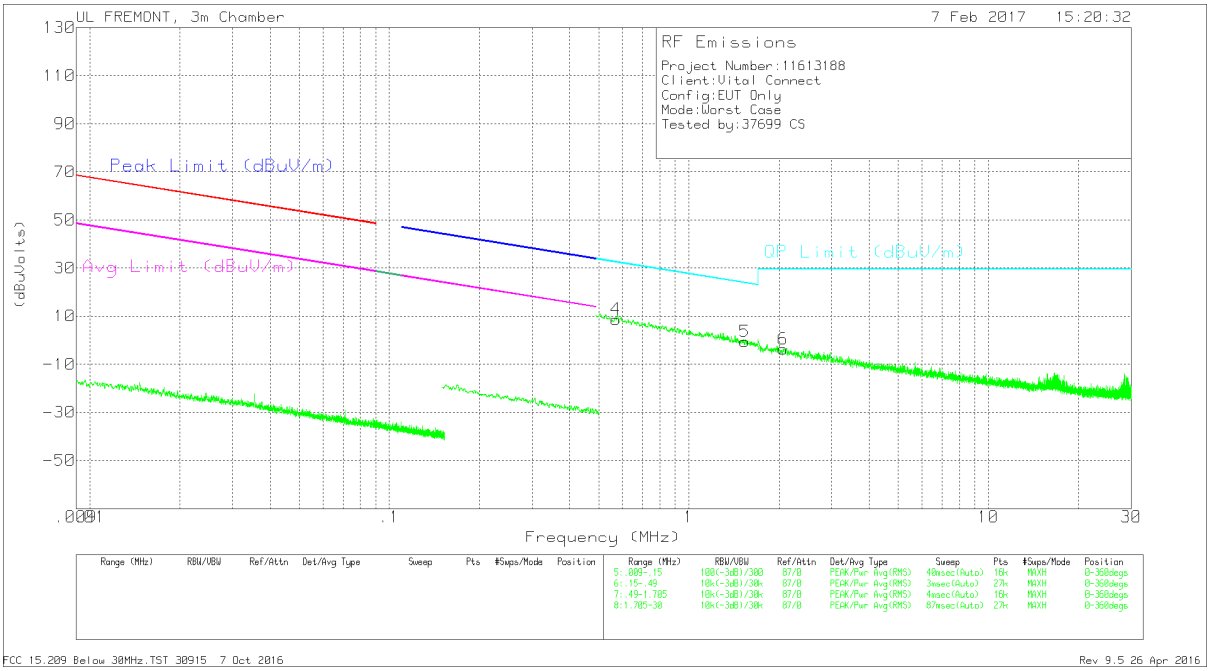
8.5. WORST-CASE BELOW 30 MHz

SPURIOUS EMISSIONS 9kHz TO 30 MHz (WORST-CASE CONFIGURATION)

FACE ON PLOT



FACE OFF PLOT



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
4	.57208	35.44	Pk	11.7	1.5	-40	8.64	32.46	-23.82	0-360
1	.58253	36.5	Pk	11.7	1.5	-40	9.7	32.3	-22.6	0-360
5	1.53644	26	Pk	11.9	1.5	-40	-.6	23.9	-24.5	0-360
2	1.55396	26.88	Pk	11.9	1.5	-40	.28	23.8	-23.52	0-360
3	2.06342	22.34	Pk	11.9	1.5	-40	-4.26	29.5	-33.76	0-360
6	2.06761	22.86	Pk	11.9	1.5	-40	-3.74	29.5	-33.24	0-360

Pk - Peak detector

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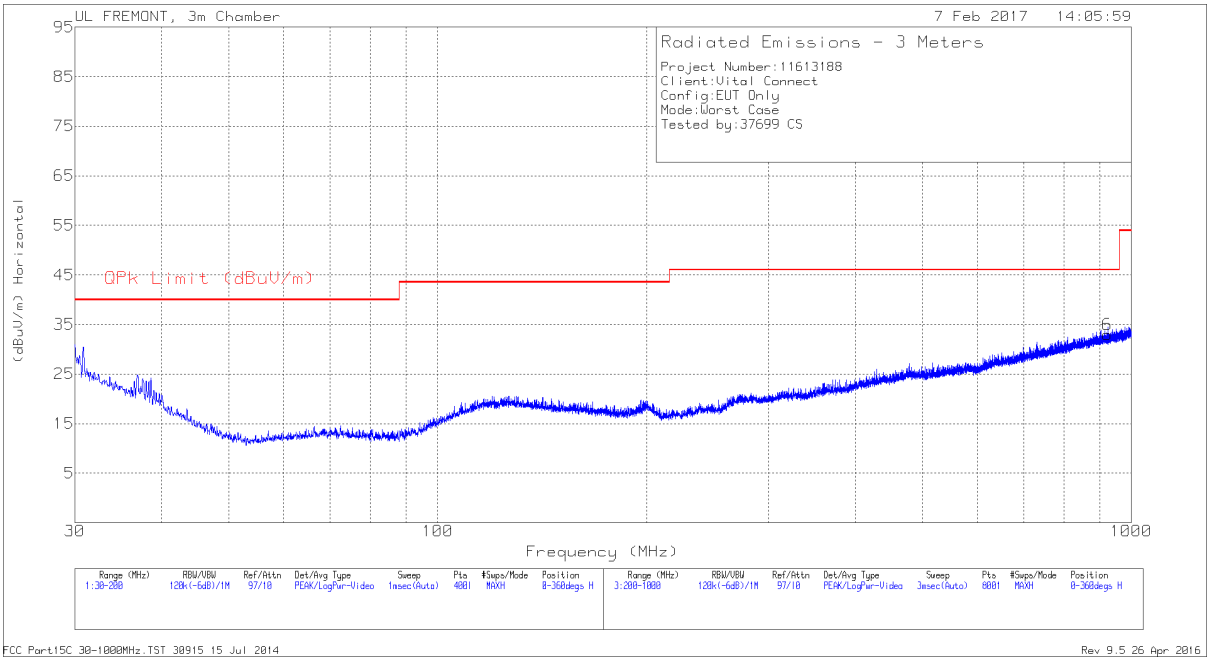
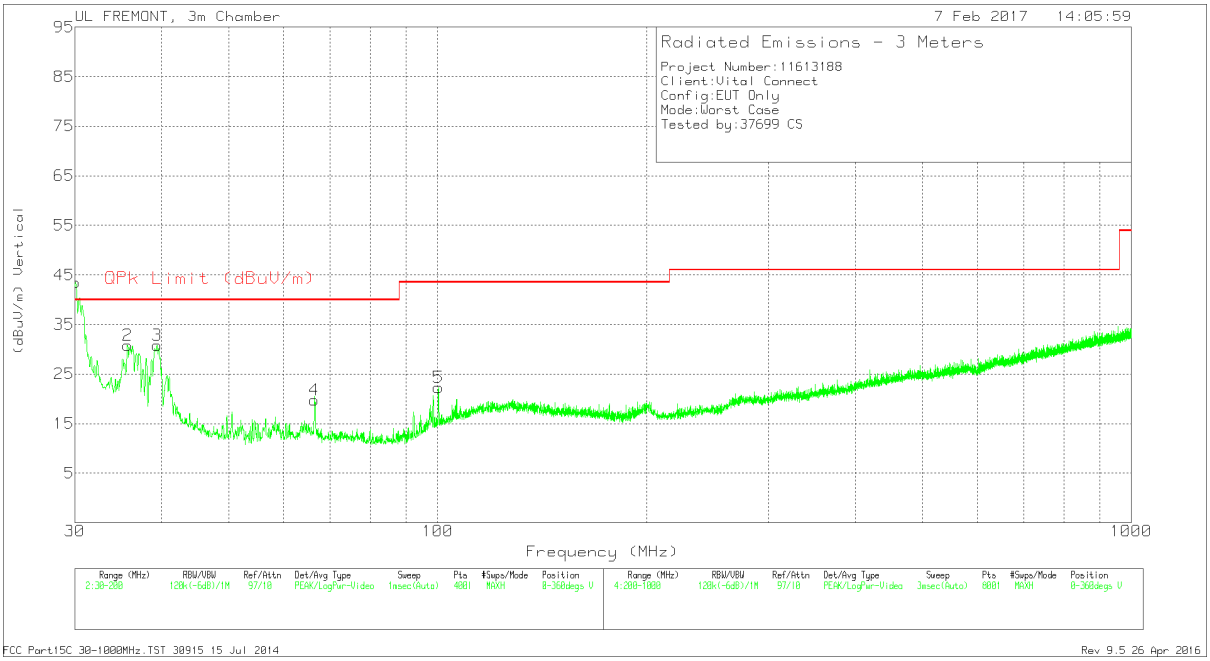
8.6. WORST-CASE BELOW 1 GHz

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION)

HORIZONTAL PLOT



VERTICAL PLOT



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T408 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	30.078	26.9	Qp	25.3	-27.3	24.9	40	-15.1	150	101	V
2	35.7375	36.92	Pk	21.1	-27.2	30.82	40	-9.18	0-360	100	V
3	39.3925	39.56	Pk	18.4	-27.1	30.86	40	-9.14	0-360	100	V
4	66.465	34.42	Pk	12	-26.7	19.72	40	-20.28	0-360	100	V
5	100.2525	34.25	Pk	14.3	-26.3	22.25	43.52	-21.27	0-360	100	V
6	924	28.59	Pk	26.4	-22	32.99	46.02	-13.03	0-360	200	H

Qp - Quasi-Peak detector
Pk - Peak detector

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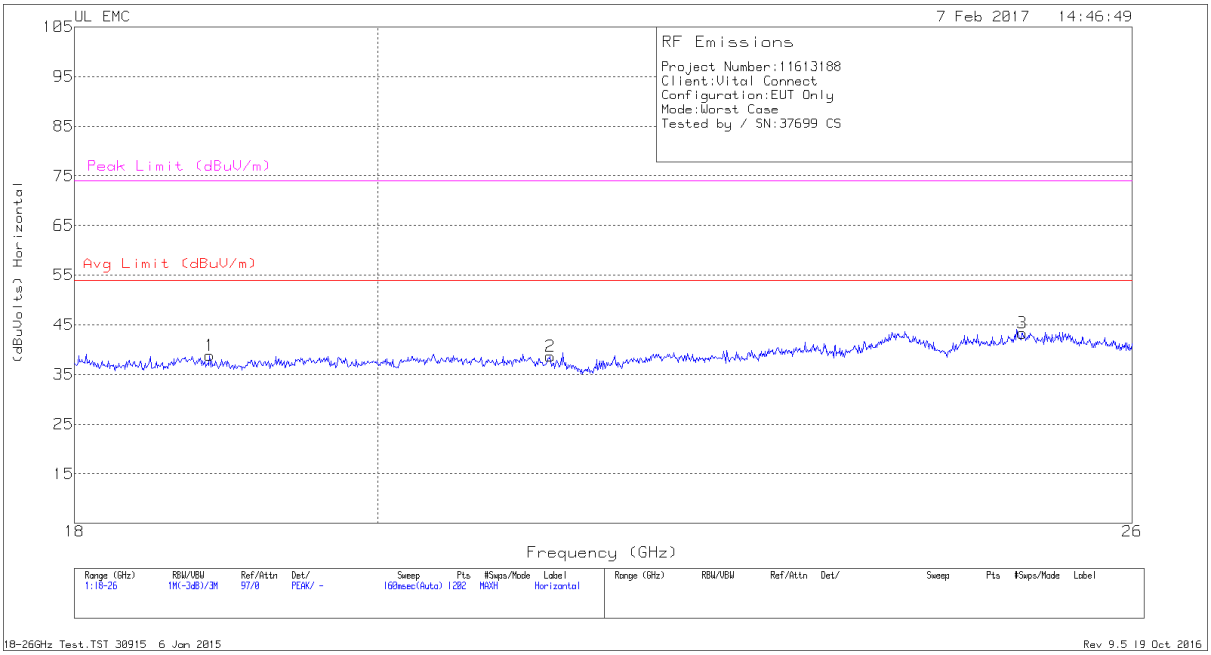
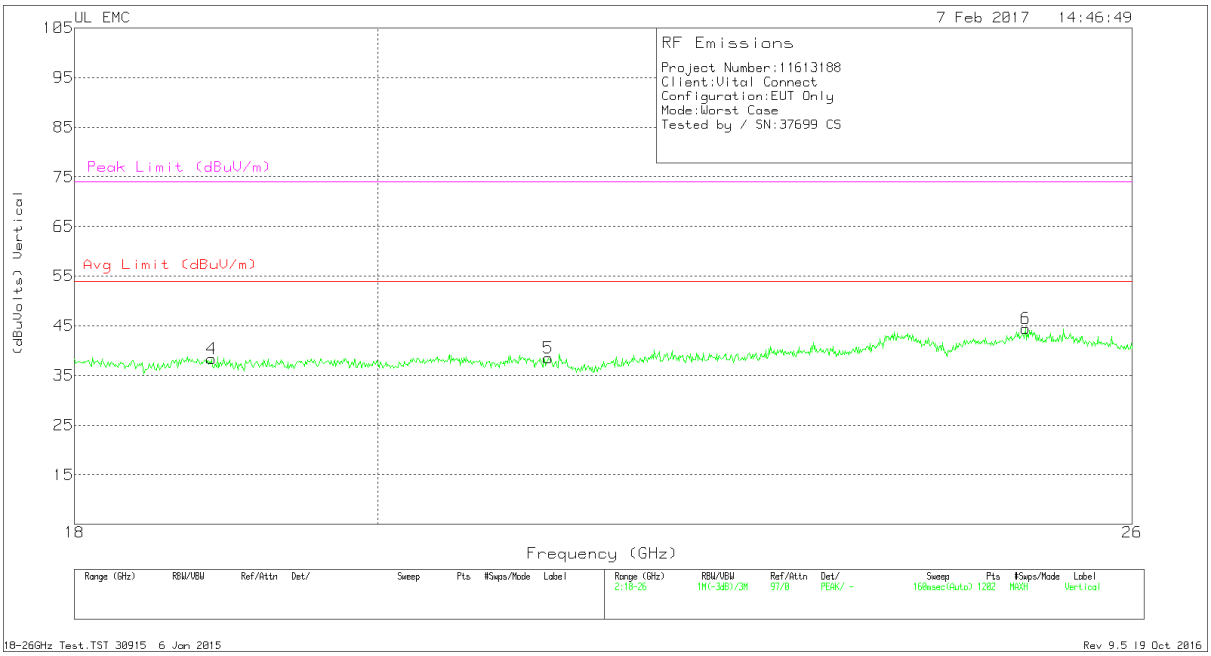
8.7. WORST-CASE ABOVE 18 GHz

SPURIOUS EMISSIONS 18 TO 26 GHz (WORST-CASE CONFIGURATION)

HORIZONTAL PLOT



VERTICAL PLOT



Data

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T449 (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	18.866	41.03	Pk	32.5	-25.2	-9.5	38.83	54	-15.17	74	-35.17
2	21.237	40.37	Pk	33.1	-25.3	-9.5	38.67	54	-15.33	74	-35.33
3	25.024	43.13	Pk	34.2	-24.5	-9.5	43.33	54	-10.67	74	-30.67
4	18.879	40.73	Pk	32.5	-25.4	-9.5	38.33	54	-15.67	74	-35.67
5	21.224	39.9	Pk	33.1	-25	-9.5	38.5	54	-15.5	74	-35.5
6	25.054	44.7	Pk	34.3	-25	-9.5	44.5	54	-9.5	74	-29.5

Pk - Peak detector

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